

**Montana Board of Oil and Gas Conservation
Environmental Assessment**

Operator: Minuteman Exploration LLC
Well Name/Number: Brooklyn 16-16-36-1
Location: SE NW Section 36 T16N R16E
County: Fergus, **MT; Field (or Wildcat)** Wildcat

Air Quality

(possible concerns)

Long drilling time: No short, 5 to 10 days drilling time.

Unusually deep drilling (high horsepower rig): No, small single drilling rig to drill to a 2,681' TD, Otter Formation test.

Possible H₂S gas production: None anticipated.

In/near Class I air quality area: Not in a Class I air quality area.

Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under 75-2-211.

Mitigation:

☒ Air quality permit (AQB review)

☐ Gas plants/pipelines available for sour gas

☐ Special equipment/procedures requirements

☐ Other: _____

Comments: Small single derrick drilling rig.

Water Quality

(possible concerns)

Salt/oil based mud: No, freshwater and freshwater mud system to be used.

High water table: No, high water table expected.

Surface drainage leads to live water: Closest drainages is toward unnamed low/marshy area to the north.

Water well contamination: None, no water wells in the area. Steel surface casing will be run and cemented to surface to protect ground waters.

Porous/permeable soils: No, sandy clay soils.

Class I stream drainage: No, Class I stream drainages would not be affected.

Mitigation:

☐ Lined reserve pit

☒ Adequate surface casing

☐ Berms/dykes, re-routed drainage

☐ Closed mud system

☐ Off-site disposal of solids/liquids (in approved facility)

☐ Other: _____

Comments: Adequate surface casing to be set to 1231' to protect surface water and any ground water.

Soils/Vegetation/Land Use

(possible concerns)

Stream crossings: No, streams to be crossed; only crossing ephemeral drainages along the existing road.

High erosion potential: No, small cut –about 5' and small fill up to 7', required.

Loss of soil productivity: No, location will be restored after drilling, if nonproductive. If productive unused portion of drillsite will be reclaimed.

Unusually large wellsite: No, drillsite is 300'X300'.

Damage to improvements: Slight, surface use is cultivated land.

Conflict with existing land use/values: Slight

Mitigation

☐ Avoid improvements (topographic tolerance)

☐ Exception location requested

☒ Stockpile topsoil

☐ Stream Crossing Permit (other agency review)

☒ Reclaim unused part of wellsite if productive

☐ Special construction methods to enhance reclamation

☐ Other _____

Comments: Will utilize existing trail. About 0.4 mile of new road will be build into this location. Closed loop –no earthen pits will be utilized for drilling. Drilling fluids, mud solids and cuttings will be removed from site.

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: Closest residence is about a mile to the south.

Possibility of H₂S: None anticipated.

Size of rig/length of drilling time: Small single derrick drilling rig/Short drilling time 5 to 10 days.

Mitigation:

☒ Proper BOP equipment

☐ Topographic sound barriers

☐ H₂S contingency and/or evacuation plan

☐ Special equipment/procedures requirements

☐ Other: _____

Comments: Adequate amount of surface casing and operational BOP equipment should mitigate any problems.

Wildlife/recreation

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified): None identified.

Proximity to recreation sites: None identified.

Creation of new access to wildlife habitat: None
Conflict with game range/refuge management: None
Threatened or endangered Species: Threatened or endangered species identified are the Pallid Sturgeon and Black-Footed Ferret. Species of concern is the Greater Sage Grouse and Sprague's Pipit. NH tracker website lists zero (0) species of concern in T15N R16E.

Mitigation:

- ☐ Avoidance (topographic tolerance/exception)
- ☒ Other agency review (DFWP, federal agencies, DSL)
- ☐ Screening/fencing of pits, drillsite
- ☐ Other: _____

Comments: Surface use is a private cultivated land and State owned minerals. There may be species of concern that could be impacted by this wellsite. We ask the operator to consult with the surface owner if a species of concern is discovered at this location. The Board of Oil & Gas has no jurisdiction to manage private lands.

Historical/Cultural/Paleontological

(possible concerns)

Proximity to known sites None identified

Mitigation

- ☐ avoidance (topographic tolerance, location exception)
- ☒ other agency review (SHPO, DSL, federal agencies)
- ☐ Other: _____

Comments: Surface use is a private cultivated land. There may be historical/cultural/paleontological sites that maybe impacted by this wellsite. The surface owner may chose to preserve these sites or not, if they are found during construction of the wellsite. The Board of Oil & Gas has no cultural resource jurisdiction on private lands.

Social/Economic

(possible concerns)

- ☐ Substantial effect on tax base
- ☐ Create demand for new governmental services
- ☐ Population increase or relocation

Comments: No, impact expected from the drilling of this well.

Remarks or Special Concerns for this site

No special concerns about this wellsite. This is a Heath Formation test to be drilled to 2681' TD, Otter Formation at TD.

Summary: Evaluation of Impacts and Cumulative effects

No significant or long term impacts expected from the drilling of this well. Some short term impacts will occur.

I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): /s/Thomas Richmond

(title:) Administrator

Date: February 6, 2014

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC
website

(Name and Agency)

Fergus County water wells

(subject discussed)

February 6, 2014

(date)

US Fish and Wildlife, Region 6 website

(Name and Agency)

ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES

MONTANA COUNTIES, Fergus County

(subject discussed)

February 6, 2014

(date)

Montana Natural Heritage Program Website (FWP)

(Name and Agency)

Heritage State Rank= S1, S2, S3, T15N R16E

(subject discussed)

February 6, 2014 US Fish and Wildlife, Region 6 website

(date)

If location was inspected before permit approval:

Inspection date: _____

Inspector: _____

Others present during inspection: _____